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Re:	Recirculation of P802.16 REVe/D10
Abstract	Corrections for pilot modulation
Purpose	Adoption of suggested changes into P802.16e/10
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Corrections for pilot modulation

Introduction
The pilot modulation section of "**8.4.9.4.3 Pilot modulation" includes contradicting text against IEEE802.16-2004 and P802.16-2004-Cor1/D4.**

Suggested Remedies

8.4.9.4.3 Pilot modulation
[Change the first paragraph in 8.4.9.4.3 as indicated:]
For the mandatory tile structure in the uplink, and for the TUSC1/TUSC2 structures in the downlink, pilot subcarriers shall be inserted into each data burst in order to constitute the symbol and they shall be modulated according to their subcarrier location within the OFDMA symbol.

[Change the 3rd paragraph as follows]
In the downlink all permutations, except uplink PUSC and downlink TUSC1, and for the optional uplink tile structure each pilot shall be transmitted with a boosting of 2.5 dB over the average non-boosted power of each data tone. The Pilot subcarriers shall be modulated according to the following formula equation (135):

[Add the following text before equation at line 48]
When SDMA allocation in AMC AAS zone is made, equation (135a) shall be used for the pilot modulation:

$$Re\{c_k\} = \frac{8}{3}\left(\frac{1}{2} - w_k\right)p_k$$

$$Im\{c_k\} = 0$$
(135a)

where
p is the pilot's polarity (as described in section 8.4.6.3.3) for SDMA allocations in AMC AAS zone, and p= 1 otherwise.

NOTE—Please note change in equation above.

[Insert the following text at the end of 8.4.9.4.3:]
The pilots in the downlink preamble shall follow the instructions in 8.4.6.1.1, and shall be modulated according to the following formula:

$$Re\{PreambleModulated\} = 4 \cdot \sqrt{2} \cdot \left(\frac{1}{2} - W_k\right)$$
(135a)

$$Im\{PreambleModulated\} = 0$$

In the downlink, for PUSC, FUSC, AMC and optional FUSC permutations, all pilots (of the segment, in case of PUSC) shall be modulated, whether or not all the subchannels are allocated in the DL-MAP. For AMC and PUSC-ASCA permutations in AAS zone or in a zone using 'Dedicated pilots', the BS shall not modulate the pilots that belong to bins that are not allocated in the DL-MAP, or are allocated as gaps (DIUC=13).